



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/821,188      | 04/09/2004  | Bu-kil Jeong         | 1572.1338           | 8425             |

21171 7590 08/11/2006

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

|          |
|----------|
| EXAMINER |
|----------|

EARLY, MICHAEL JACOBY

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

3744

DATE MAILED: 08/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/821,188

Applicant(s)

JEONG ET AL.

Examiner

Michael J. Early

Art Unit

3744

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 May 2006 and 06 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 17-22 is/are rejected.
- 7) ☒ Claim(s) 16 and 17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/6/06</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

**Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 18, 19, 21 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Igari et al. (U.S. 6,044,654).

Igari et al. disclose:

- a freezing compartment (7 – freezing chamber);
- a refrigerating compartment (6 – refrigerating chamber);
- an evaporating unit (8 – cooling unit);
- a plurality of ducts (11 – back cold-air channel; 18 – side cold-air supply duct) in communication with the evaporating unit (as seen in Figures 1, 2) and provided at a rear of the refrigerator (as seen in Figures 1, 2) and further comprise:
  - cooling air supply holes (14 – back blowoff ports; 23a, 23b, 23c – side blowoff ports);
  - a duct (11 – back cold-air channel) positioned at a top portion of the refrigerating compartment (as seen in Figure 2);
  - side ducts provided on opposite sides of the refrigerating compartment perpendicular to the duct positioned at the top portion of the refrigerating compartment (as seen in the first illustration of Figure 2 below);
- a guide duct comprising a connecting hole on a side thereof (as seen in the partial illustration of Figure 1 below);
- the side ducts (18 – side cold-air duct) are bar shaped and extend to a lower portion of the refrigerating compartment (as seen in Figure 2).

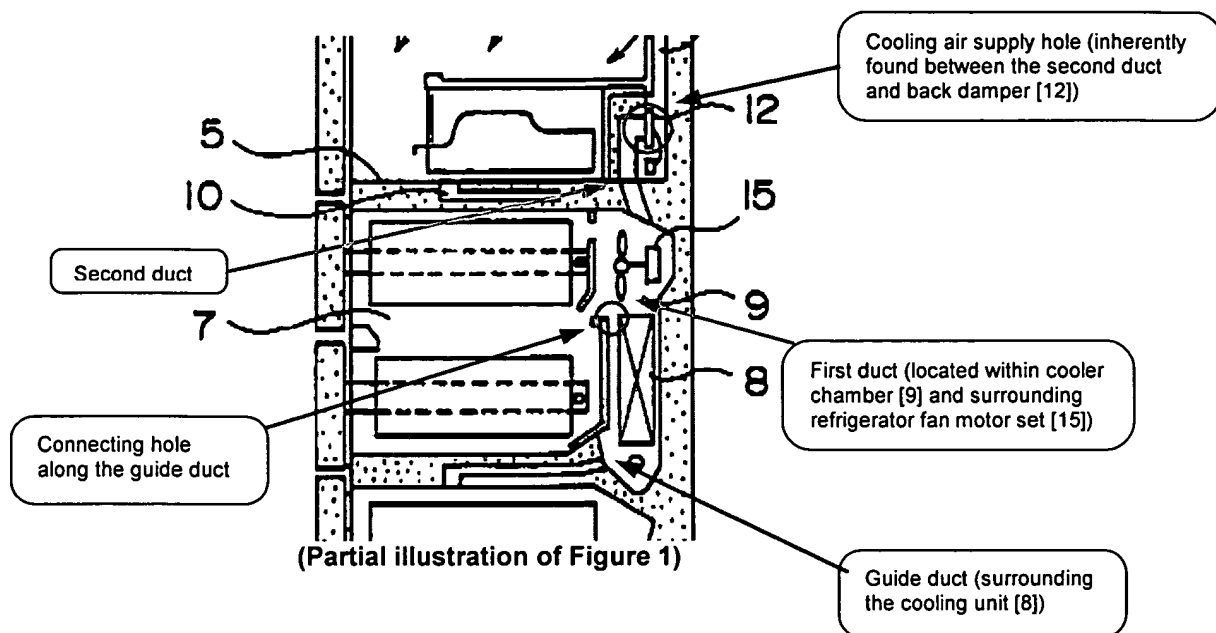
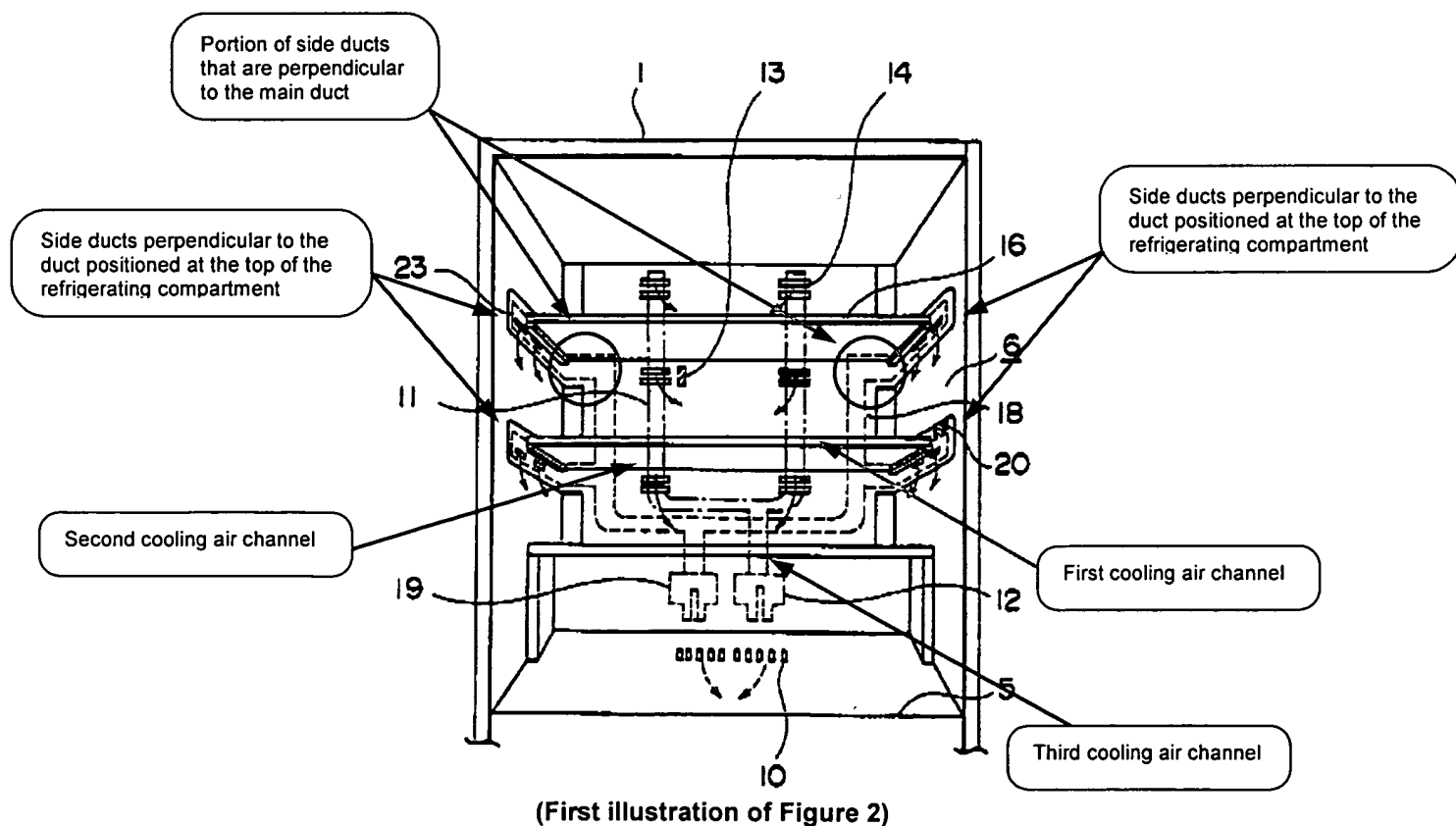


FIG. 2



**Claim Rejections - 35 USC § 103**

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-5, 7, 8, 10, 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igari et al. (U.S. 6,044,654) in view of Korean Patent (KR 1999-39321).

Igari et al. disclose:

- a main body (the refrigeration unit as seen in Figures 1 and 2; col. 4, lines 1 – 3);

Art Unit: 3744

- a freezing compartment (7 – freezing chamber);
- a refrigerator compartment (6 – refrigerating chamber);
- an evaporating unit (8 – cooling unit) provided in the main body (as seen in Figure 1);
- a first duct (as seen in the partial illustration of Figure 1 above) and a second duct (as seen in the partial illustration of Figure 1 above) in communication with the evaporating unit (as seen in Figure 1);
- the second duct comprising a cooling air supply hole (the hole is inherently found between the back damper [12] and second duct; as seen in the partial illustration of Figure 1 above);
- a main duct (11 – back cold-air channel) provided at the top portion of the refrigerating compartment (as seen in Figures 1, 2);
- side ducts (18 – side cold-air supply duct) in communication with the main duct (as seen in Figure 2) and provided on opposite sides of the edge of the refrigerating compartment perpendicular to the main duct (as seen in the illustration of Figure 2 above);
- side cooling air supply holes (23a, 23b, 23c – side blowoff ports);
- a damper (12 – back damper) provided inside of the main duct (as seen in Figure 2);
- the main duct further comprises:
  - a first cooling air channel and a second cooling air channel on the inside thereof (as seen in the illustration of Figure 2 above);
  - a main cooling air supply hole (14 – back blowoff ports) on the opposite sides of a front side thereof (as seen in Figure 2);
  - a third cooling air channel on the inside thereof (as seen in the illustration of Figure 2 above);
- the side ducts extend to a lower part of the refrigerating compartment (as seen in Figure 2);

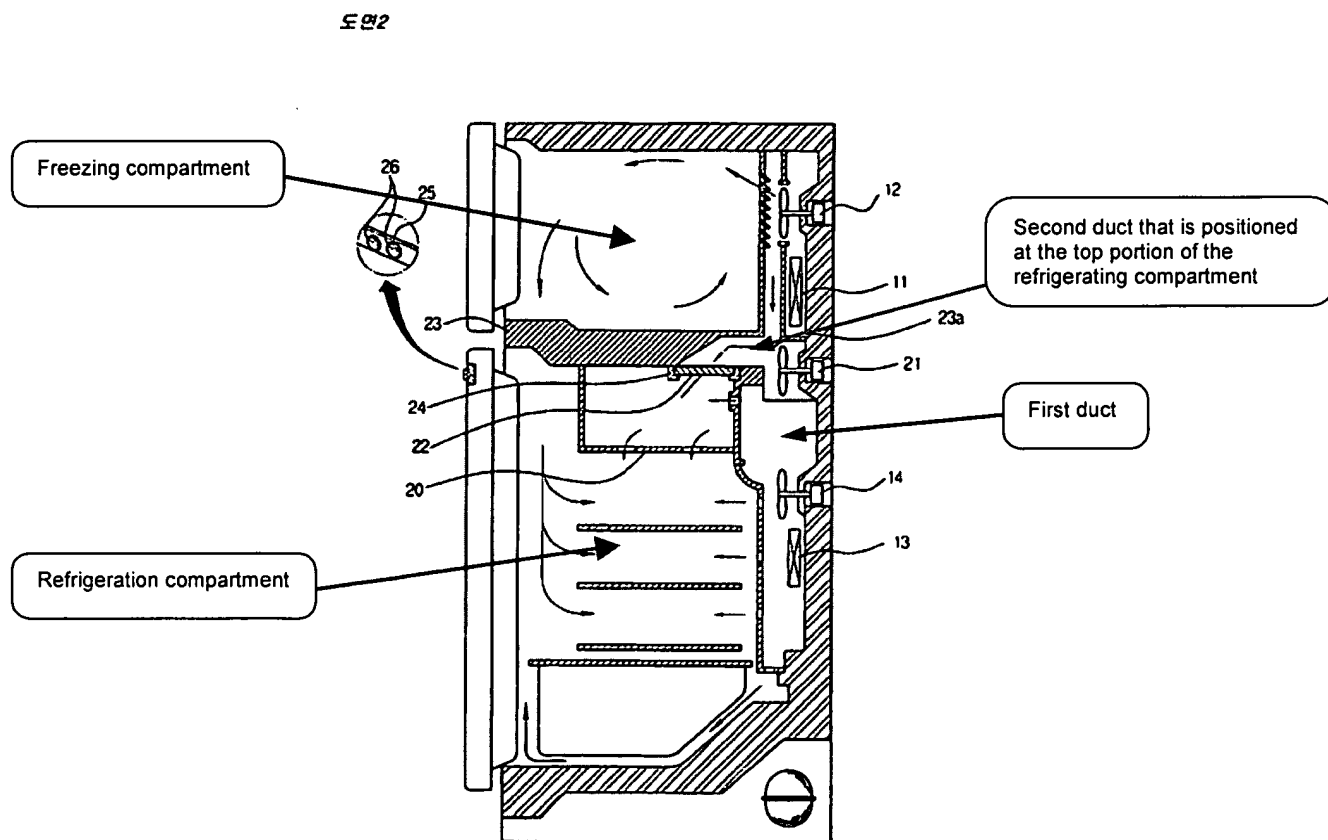
Art Unit: 3744

- a guide duct in communication with the evaporating unit and comprises a connecting hole on a side thereof (as seen in the partial illustration of Figure 1 above).

Igari et al. do not expressly disclose:

- the second duct is positioned at a top of the refrigerating compartment.

Korean Patent (KR 1999-39321) teaches of a refrigeration unit that is comprised of a freezing compartment, a refrigeration compartment, an evaporator (13), a first and second duct that are in communication with the evaporator (as seen in the illustration of Figure 2 below). Further disclosed is that the second duct is positioned at a top portion of the refrigeration unit (as seen in the illustration of Figure 2 below).



Regarding claim 1, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the refrigerator of Igari et al. by incorporating a the second duct at a top portion of the refrigeration compartment, as taught by Korean Patent (KR 1999-39321), so that the refrigeration compartment can be more uniformly cooled by the air that is distributed by the duct.

Claims 6, 9, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Igari et al. in view of Korean Patent (KR 1999-39321), and in further view of Park et al. (U.S. 5,664,437).

Igari et al. in view of Korean Patent (KR 1999-39321) do not disclose:

- a lamp and details related thereto;
- details related to the cooling air supplied to the side ducts.

Park et al. teach of a cool-air duct that is used to efficiently direct cool air throughout a refrigerator (see col. 1, lines 9-12). Park et al. further disclose that a cool-air distribution apparatus (17) is located within the refrigerator; is comprised of: a cool-air duct (25), lamp cover (31) and an indoor lamp (30), which is located along the front portion of the apparatus; and is used to guide cool air generated from the system's evaporator (12) into its cool-air duct (25) (see col. 5, lines 32-52, lines 53-56; Figure 6).

Park et al. further disclose that cooled air supplied to both the side cold-air supply duct (18) and back cold-air channel (11) originate along the same rear edge of the refrigerator (as seen in Figures 2, 3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the refrigerator of Igari et al. in view of Korean Patent (KR 1999-39321) by originating the cold-air supply ducts at the same location within the refrigerator, as taught by Park et al., for aesthetic purposes.



Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Igari et al. in view of Park et al.

Igari et al. do not disclose:

- a lamp and details related thereto;

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the refrigerator of Igari et al. by incorporating a lamp along the front of cool-air distribution apparatus, as taught by Park et al., for aesthetic purposes.

#### **Allowable Subject Matter**

Claims 16 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### **Response to Arguments**

Applicant's arguments, see Remarks (pages 1 and 2), filed 5/24/06, with respect to the rejection(s) of claim(s) 1 and 2 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

Applicant's arguments filed 5/24/06, regarding claims 18-20 have been fully considered but they are not persuasive. As aforementioned, the combined prior art discloses all of the recited limitations.

**Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Early whose telephone number is (571) 272-3681. The examiner can normally be reached on Monday - Friday, 7am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl Tyler can be reached on (571) 272-4834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3744

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MJE  
8/4/06

Michael J. Early  
Patent Examiner  
Art Unit 3744



EDWARD K. LOOK  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700

8/2/06